

Dredging and Dredge Material Management in New Hampshire



Great Bay Siltation Commission, December 1, 2008

Why Dredge in Tidal Waters?

- Improve or maintain navigation.
- Maintain intake/outfall structures.
- Hazardous waste remediation.
- Restoration of submerged aquatic vegetation (e.g., eel grass), shellfish beds, anadromous fish habitat.
- Sand or gravel mining for beach nourishment or upland use.

Dredging Projects in New Hampshire

- The U.S. Army Corps of Engineers (ACOE) maintains 8 projects for navigational purposes:
 - Hampton Harbor
 - Little Harbor
 - Portsmouth Harbor/Piscataqua River
 - Rye Harbor
 - Bellamy River
 - Cocheco River
 - Lamprey River
 - Squamscott River
- Limited state and private navigational dredging in tidal waters. Only 12± marinas in tidal waters.

ACOE-maintained Tributaries to Great Bay

	Last Dredged	Last Surveyed
➤ Bellamy River	1896	2006
➤ Lamprey River	1903	2004
➤ Squamscott River	1911	2006

Based on the survey data, ACOE has determined that dredging is not warranted nor is dredging anticipated in the foreseeable future.

State and Private Dredging

- Currently the State is responsible for only one navigation project in tidal waters: maintenance of the commercial and recreational anchorages in Hampton and Seabrook Harbors.
- State has requested that ACOE assume responsibility for future maintenance of commercial anchorages in Hampton and Seabrook Harbors (Section 107 Study).
- There have been relatively very few private navigational dredging projects in tidal waters. Recent projects include U.S. Coast Guard (USCG) boat basin in Piscataqua River and Phillips Exeter Academy docking facilities in Squamscott River.

How Does ACOE Determine Need for Navigational Dredging?

- Evaluate existing navigation conditions.
- Assess use of waterbody.
- Funding is prioritized based on “value to nation” assessment, which focuses primarily on commercial usage, and cost benefit analysis.
- Value to nation assessment applies to new and maintenance dredging activities.

Once Need is Established, Then What?

- Sampling and testing of material.
- Identification of a suitable disposal site for the material.
- Coordination with state & federal agencies (i.e., regulatory process) and public.
- Request funding from Congress.
- Develop plans and specifications.
- Advertise and award contract.

The State Regulatory Process

- Per RSA 482-A, all dredging in tidal waters requires a permit from the DES Wetlands Bureau.
- Wetlands Bureau coordinates project review with DES Waste Management Division, DES 401 Water Quality Certification Program, DES Shellfish Program, DES Coastal Program and NH Fish & Game Department, ACOE & National Marine Fisheries Service (NMFS).
- Dredging activities in tidal waters are generally classified as Major Impact projects by the Wetlands Bureau.
- Though not required, applicants typically meet with Dredge Management Task Force (DMTF) prior to submittal of wetlands application.

NH Dredge Management Task Force

- The New Hampshire Dredge Management Task Force (DMTF) is an interagency work group formed in 1993 to review existing and proposed dredging projects and to develop policies, rules and guidelines for dredging activities in New Hampshire's coastal waters.
- The DMTF provides technical and regulatory expertise to ensure that dredging projects are conducted in a manner consistent with state and federal rules and regulations.
- **Members:** ACOE, EPA, NMFS, USFWS, NHCP, DES Wetlands Bureau & Waste Management Division, NH Fish & Game Dept., PDA-DPH, UNH, Congressional Delegation staff ...

The Federal Regulatory Process

- Per Section 404 of the Clean Water Act any discharge of dredged material into waters of the U.S. requires a permit from the ACOE.
- Depending on size of dredge footprint and resource impacts activity will either qualify for the State Programmatic General Permit (SPGP) or an Individual Permit (IP).
- Maintenance dredging in tidal waters may qualify for SPGP, however, any new dredging in tidal waters $\geq 20,000$ square feet requires an IP.

The Federal Regulatory Process cont. ...

- ACOE coordinates its project review with EPA, NMFS, U.S. Fish & Wildlife Service and USCG.
- If dredging activity requires an IP, CZMA Federal Consistency Certification and 401 Water Quality Certification is also required.

Issues Facing Tidal Dredging Projects

- Disposal Options

- Dredge Windows

- Eelgrass

- Funding

Disposal Options

- Beneficial Use – Beach nourishment is the preferred alternative where practicable.
- Offshore Disposal – For “clean” material that’s too fine for beach renourishment. The Cape Arundel Disposal Site, NH’s primary offshore disposal site, is scheduled to close in 2010.
- Upland Disposal – For material unsuitable for beach renourishment or near shore/ocean disposal. Must complete NH Comprehensive Upland Dredge Material Disposal Study.

Dredge Windows (time of year restrictions)

- To prevent or minimize adverse impacts to fisheries.
- November 15 – March 15, per Wetlands Bureau Rules.
- Based on life history data, temperature, resource surveys, harvest data, literature & historical record.
- Dredge Windows add time and expense to projects.
- Arguably the most contentious tidal dredging issue in New England.

Eelgrass

- Mapping conducted in 2007 found approximately 1,500 acres of eelgrass in the Great Bay Estuary, of which approximately 12% was found in federally maintained channels.
- Significant work by DMTF to ensure that impacts to eelgrass beds are avoided and/or minimized to the greatest extent practicable, and to adequately compensate for unavoidable impacts.

Funding

- New Hampshire's navigation improvement & maintenance projects are "small" compared to projects regionally and nationally.
- NH's harbors and rivers don't compete well in ACOE's value-to-nation model compared with other tidal waterbodies regionally and nationally.
- Examples:
 - Port of NH averages 5.5 million tons of cargo per year while Portland, ME averages 27 million tons of cargo per year.
 - Hampton Harbor (NH's largest commercial fishing port) isn't among New England's top 10 largest commercial fishing ports based on total weight of fish landed or landed value.

Funding cont. ...

- As a result, New Hampshire has relied heavily on Congressional appropriations to fund projects.
- State matching funds are provided by Pease Development Authority – Division of Ports & Harbors through the Harbor Dredging and Pier Maintenance Fund, per RSA 12-G:46.

What if State Purchased its Own Dredge to Reduce Costs?

- **Case Study – Barnstable County, Mass. (Cape Cod)**
- **Hydraulic (cutterhead) dredge purchased in 1996 through a state grant for \$1 million.**
- **Dredge Advisory Council develops yearly schedule and dredging rate.**
- **County has approximately 50 non-federal dredging projects.**
- **Dredge approximately 90,000 cubic yards/year of predominantly clean sand used for beach nourishment.**
- **Currently charge approximately \$7/cubic yard vs. \$15-25/cubic yard.**
- **Issues: Maintenance and Dredge Windows**

Would a Dredge Make Sense for NH?

- Probably Not.
- ACOE cannot use a publicly-owned or subsidized dredge to service federal channels as it would be deemed as competing with private sector bidding on federal work.
- State would have to assume full responsibility for the 8 existing federal navigation projects → \$\$\$.
- Limited state and private dredging would leave dredge idle for entire dredge seasons.

Non-Navigational Dredging Options

- ACOE has environmental restoration programs:
 - Section 204 – Beneficial Uses of Dredged Material
 - Section 206 – Aquatic Ecosystem Restoration
- Compensatory mitigation for resource impacts within the watershed could provide funds for restoration projects.
- State and federal regulatory process is identical to that for navigational projects.

Fiscal Year 2009 Priorities

1. New Hampshire and Southern Maine Regional Dredge Material Management Plan (\$259K)
2. Hampton Harbor Navigation Improvement and Maintenance Project (\$1.7 million)
3. Piscataqua River Navigation Improvement Project (\$82,000)
4. Sagamore Creek Maintenance Dredging (\$150K)

Contact Information

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NH Dredge Management Task Force

[http://des.nh.gov/organization/divisions/water/wmb/coastal/
dmft/index.htm](http://des.nh.gov/organization/divisions/water/wmb/coastal/dmft/index.htm)